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The Year 1909
in Montana

MONTANA

Is developing more rapidly and growing faster in population than any other state.

It Invites Desirable Settlers

Inquiries concerning the resources of the state will be promptly answered, and other literature describing Montana's unequaled opportunities and advantages will be sent, free, on request.

J. H. HALL, Commissioner,
Bureau of Agriculture, Labor and Industry,
Helena, Montana.

Independent Publishing Company
Helena, Montana.

THE YEAR 1909 IN MONTANA

The Past Year and the Future's Promise
Unappropriated Public Lands
Newspaper Reports of Crops.
Review of Leading Industries.

Missoula Public Library,
Missoula, Montana.

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MONTANA

The Past Year and the Future's Promise.

The year 1909 has been one of continued and increasing prosperity in Montana. Every industry has grown and prospered. Settlers have come in by the thousands, broken raw lands and started new farms. Cities and towns have made extensive public improvements, new business blocks and dwellings have been erected in large numbers; the vast power of the mighty Missouri river has been harnessed at Great Falls and subjected to industrial use; interurban electric railway service has been inaugurated; several railroad extensions have been begun and surveys made for others. Large private irrigation projects have been completed and plans for new ones have been made. The stock industry has flourished exceedingly; the mining industry maintained its great output; and for the first time statistics indicate that the products of the soil exceeded in value those of the mine. Lesser industries, particularly lumbering, contributed materially to the total production of wealth.

Population has largely increased as a result of Montana's advantages becoming more widely known; but millions of fertile acres are still unoccupied and the development of the unparalleled resources of the Treasure State has only made a beginning.

Montana contains the only large area of fertile land in the United States that is waiting to be peopled. Of its 30,000,000 acres of arable lands only a small portion has passed into private ownership and much of this may be bought at low prices. The rest consists of government lands. Opportunities are innumerable for securing, under the homestead law or by purchase, desirable farm lands of a character so productive that within a few years they will reach a selling value similar to that of the highest priced farm lands in the richest agricultural regions of the older parts of the United States. Their value will come to be determined by what they produce, and judged by returns on investments, Montana farm lands have no equal, and increases of from one hundred to one thousand per cent in land values within the next ten years may confidently be expected.

Montana has room and land for a million new settlers to whom the cultivation of the soil will yield a support, an independence or wealth according to the ability and industry shown by them. An opportunity unequaled elsewhere is offered to the man who desires to own a home of his own and is able to support himself until his land becomes productive. Every month the unoccupied land is growing less. Some time it will all be gone; and when that time comes the end of the era of cheap land in the United States will have arrived. The prudent man will not wait. Montana now has the only great area of unoccupied, uncultivated, fertile farm lands in the country. This condition will not last long. Human beings who must draw their sustenance from the soil are born every minute of every day, but no more land is being created to supply their needs.

The only reason why Montana is not now among the first of the states in the total value of its farm products is because so small a portion of its soil has been planted to crops. The yield of the acres under cultivation and the value per acre of the crops raised place it at the head of the agricultural states in both respects. When the 30,000,000 acres of arable land within its boundaries shall be producing, the annual yield of agricultural wealth will be so great that the world will wonder that such rich farming lands were so lightly valued and allowed to lay untilled for so long a period.

The soil is the source of wealth, and Montana has fertile soil in almost unlimited quantities that has never been cultivated. It presents the opportunity for acquiring a home to the man who is intelligent enough to know an exceptional opportunity when he sees it and energetic enough to take tadvantage of it. Where in the United States (or Canada) can as much money per acre be made in farming as in Montana and where are lands bound to advance in value in equal degree?

As a consequence of the settlement of the country other industries will grow or spring up; opportunities in other lines will arise; and the increasing density of population will lessen the burden of government now falling on a few people and make possible community improvements and conveniences not now within their means.

The prime opportunity Montana now offers is to the land seeker because of the vast area of government land which is unoccupied and the low price at which land in private ownership may be bought. The supply of land in past years has far exceeded the demand for it. But now there is a great demand for land and it is now passing into the

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ownership of men who will cultivate it themselves. Besides the great number of large farms and ranches which have been subdivided in the past two years and sold in small tracts the amount of lands disposed of through the United States land offices has been almost unparalleled and the number of entries being made is increasing quarterly. One Montana land office disposed of more land in 1909 than any other land office in the United States. On July 1, 1908, there wee 46,532,440 acres of unappropriated public lands in Montana and on July 1, 1909, there were 42,900,229 acres. While thousands of acres near established lines of transportation, or preferred for other reasons, have been filed on by thousands of settlers who have come to make their homes in Montana, many million acres of desirable land are still unoccupied and unclaimed. The large number of entries made since July 1, 1909, do not lessen very much the vast acreage from which the land seeker may choose. The following table, issued by the Commissioner of the General Land Office, contains a brief description of the unappropriated lands and a statement showing their location. About 26,000,000 acres have been designated as lands coming within the provisions of the enlarged homestead act which permits the taking of 320 acres as a homestead.

UNAPPROPRIATED PUBLIC LANDS.

Land district and county.	Area unappropriated and unreserved.			Brief description of character of unappropriated and unreserved land.
	Surveyed.	Unsurveyed.	Total.	
Billings:	Acres.	Acres.	Acres.	
Carbon	354,727	106,754	461,481	Farming, grazing and mountainous.
Fergus	381	.....	381	Farming and grazing.
Rosebud	518,177	128,487	646,664	Do.
Yellowstone	776,678	535,595	1,312,273	Arid and mountainous.
Total	1,649.963	770,836	2,420,699	
Bozeman:				
Broadwater	47,911	9,346	57,257	Principally arid.
Carbon	296,169	17,753	313,922	One-third good farming land; two-thirds mountainous.
Gallatin	329,450	11,520	340,970	One-fourth good farm land; three-fourths mountainous.
Jefferson	46,095	20,218	66,313	Principally arid.
Madison	361,162	205,801	566,963	One-fourth arid; three-fourths mountainous.
Park	189,357	585,600	774,957	One-third good farm land; two-thirds arid and mountainous.
Sweet Grass	464,451	136,195	600,646	Grazing and mountainous.
Yellowstone	174,982	.....	174,982	Arid and mountainous.
Total	1,909,577	986,433	2,896,010	
Glasgow:				
Chouteau	503,832	1,649,002	2,152,834	Agricultural and grazing.
Dawson	711,535	1,160,634	1,872,169	Grazing and farming.
Valley	1,565,662	3,853,635	5,419,297	Agricultural and grazing.
Total	2,781,029	6,663,271	9,444,300	
Great Falls:				
Cascade	468,115	31,511	499,626	Grazing and agricultural.
Chouteau	3,897,126	360,303	4,257,429	Do.
Fergus	7,271	12,758	20,029	Grazing.
Lewis and Clark	14,913	14,397	29,310	Mountainous and agricultural.
Teton	1,191,543	44,690	1,236,233	Agricultural and grazing.
Total	5,578,968	463,659	6,042,627	
Helena:				
Beaverhead	350,712	244,701	595,413	Mountainous and grazing.
Broadwater	140,738	87,785	228,523	Mountainous and agricultural.
Cascade	26,298	14,133	40,431	Grazing and agricultural.
Deer Lodge	75,579	18,809	94,388	Mountainous, some agricultural.
Gallatin	7,080	.....	7,080	Mountainous.
Granite	111,029	61,709	172,738	Do.
Jefferson	11,870	180,835	192,705	Mountainous, grazing, agricultural.
Lewis and Clark	890,698	108,333	999,031	Do.
Madison	330,325	617,468	947,793	Do.
Meagher	253,008	70,030	323,038	Do.
Park	8,336	20,424	28,760	Do.
Powell	141,958	225,900	367,858	Mountainous, some agricultural.
Silver Bow	104,646	16,299	120,945	Do.
Sweet Grass	11,382	.....	11,382	Do.
Teton	36,862	75,038	111,900	Do.
Total	2,500,521	1,741,484	4,241,985	

Land district and county.	Area unappropriated and unreserved.			Brief description of character of unappropriated and unreserved land.
	Surveyed.	Unsurveyed.	Total.	
	Acres.	Acres.	Acres.	
Kalispell:				
Flathead	7,388	2,560	9,948	Valleys, mountainous, timber, grazing.
Total	7,388	2,560	9,948	
Lewistown:				
Chouteau	178,097	6,480	184,577	Broken, grazing.
Dawson	224,760	367,671	592,431	Do.
Fergus	2,054,133	1,389,894	3,444,027	Grazing, farming, timber, and mountainous.
Meagher	65,335	.....	65,335	Farming and grazing.
Rosebud	13,522	184,000	197,522	Broken, grazing.
Sweet Grass	70,718	.....	70,718	Farming and grazing.
Yellowstone	118,761	.....	118,761	Grazing.
Total	2,725,326	1,948,045	4,673,372	
Miles City:				
Custer	1,588,545	3,588,720	5,177,265	Grazing and agricultural.
Dawson	507,846	4,169,280	4,677,126	Do.
Rosebud	918,392	606,426	1,524,818	Do.
Total	3,014,783	8,364,426	11,379,209	
Missoula:				
Beaverhead	15,695	60,014	75,709	Arid and grazing.
Granite	35,671	28,596	64,267	Mountainous, timber, mineral.
Missoula	122,290	1,333,538	1,455,828	Small valleys, mountainous, timber, and mineral.
Powell	12,086	19,320	31,406	Mountains, timber, grazing, mineral.
Ravalli	1,809	97,654	99,453	Do.
Sanders	29,980	25,927	55,907	Agricultural, timber, mineral, mountainous.
Silver Bow	.....	9,400	9,400	Mountainous, mineral.
Total	217,531	1,574,449	1,791,980	
State total	20,385,086	22,515,143	42,900,229	

The fact that the **average production** per acre of cultivated land in Montana can be equalled only by the **highest priced and most fertile lands** in older communities, has been established by statistics published by the Department of Agriculture. The yields made are so great that Montana farm lands are in a class by themselves. Montana agricultural exhibits win prizes in competition with the rest of the world wherever shown. The past year has been one of continued and repeated triumphs.

At the Spokane Apple Show, Ben Kress of Hamilton, Ravalli county, was awarded first prize for McIntosh Red apples. At the Dry Farming Congress, Willis Scott of Eureka, Lincoln county, was awarded the cup for the best exhibit of Turkey Red wheat grown in Washington, Oregon or Montana, and Lohr Bros. of Tampico, Valley county, won the cup for the best alfalfa seed grown in those three states. Still more notable was the success of Montana exhibitors at the Third National Corn Exposition which was held Dec. 6-18 at Omaha. In the sweepstakes for wheat grown in the western portion of the United States, Gus Siegeling of Armington, Cascade county, won the first prize. In sweepstakes open to the world H. F. Albrecht of Kalispell, Flathead county, won first for best sheaf of field peas; B. F. Booker of Helena, Lewis and Clark county, first on marrow fat peas, and Gus Siegeling of Armington first for best peck of navy beans. W. Wooldridge of Hinsdale, Valley county, was third on ten ears of corn raised in the western zone of states by dry farming methods.

A worlds' record yield of oats was established by a Montana farmer in 1909. On his farm near Bozeman, Gallatin county, Rudolf Vogel, Jr., grew 488 bushels of oats on two and one-half acres of ground. The oats weighed, when threshed, 43 pounds to the bushel. This surpasses a yield of 163 bushels an acre made in Yellowstone county a few years ago.

NEWSPAPER REPORTS OF CROPS.

The newspapers of Montana are clean, able, prosperous, alert for news and eager to make known the advantages and opportunities which Montana has to offer to the homeseeker. They reflect the spirit of the people and therefore are filled with a confidence in the future for which they are able to give entirely convincing reasons. They are working every day of every month for the development of Montana; and their work will be of incalculable benefit both to those who now live in the state and to those who will have the good fortune to move into it. Last summer this office asked the newspapers to obtain and print reports of crop productions in the respective localities. They have generally done so; and while all state papers do not reach this office, the following clippings, taken from a number of them, will give a fair idea of the success farmers are meeting with in widely separated sections of Montana.

Bainville Tribune (Valley County): When you are speaking about fine large exhibits from the garden the samples shown to us Monday by Wm. Doyle are certainly the limit. The garden fruit was all ripe and the watermelon weighed 16¼ pounds, the pumpkin 19½ pounds. He showed an ear of corn that measured 13 inches and a sunflower stalk 8½ feet. The exhibits were grown on the farm of Thos. Orrison, who lives about six miles from Bainville.

Billings Gazette (Yellowstone County): The largest beet ever seen in the city, and what is believed to be the most gigantic ever produced anywhere, is now on exhibition at the Chamber of Commerce, having been brought in by L. W. Burg, who raised it in his garden on his farm west of the city.

The beet is of the long, red garden variety and its size is such that it really must be seen to be appreciated. The monster is 24 inches in length, that dimension being the main body of the vegetable, eight inches in diameter, and weighs 28½ pounds. Mr. Burg states that there are many other beets in the rows, practically as large as the one on display, and that notwithstanding their great size, the vegetables are fine grained and of delicious flavor.

Bozeman Chronicle (Gallatin County): T. B. Story has just finished threshing, and off of one ten acre lot he got 1200 bushels of the best No. 1 white oats.

Choteau Acantha (Teton County): The S. T. ranch has again taken the pennant for potatoes. Thos. Couch, owner of the ranch, states that the yield is 85,000 pounds from three acres. The quality as well as the yield is of the finest.

Conrad Observer (Teton County) gives figures of some grain yields in that section as follows:

Threshing at B. R. Fowlers' 540-acre spring wheat field about eight miles east of town was finished last Friday. He had 14,960 bushels, machine measure, an average of over 27 bushels to the acre. A 10-acre tract belonging to Al. J. Fowler, adjoining that of B. R., went over 33 bushels to the acre.

Dillman Bros. threshed an average of 40 bushels to the acre on 60 acres, spring breaking, and 25 bushel to the acre on 60 acres that had been in crop for four years in succession and last year was disced in on the stubble.

Emil Erickson threshed 13 bushels to the acre on a 75-acre tract of flax.

Ryan & Withee threshed over 47 bushels to the acre of spring wheat on a 50-acre tract and on another tract of 50 acres in the same locality they threshed 34 bushels to the acre.

Jas. A. Hughes, on the Dry Fork, this week threshed over 3,000 bushels of wheat and oats from a tract of about 90 acres.

James Wilson threshed oats that went over 100 bushels to the acre and wheat that went 32 bushels to the acre.

J. M. Ryan, of the Conrad Townsite Company, reports that the 8-acre crop of potatoes that were put in late in the summer on sod ground have turned out good and are turning out over 100 bushels to the acre. It will be remembered that the potatoes were planted by a new method in which a steam plow was arranged with a stove-pipe in front of each plow. Down these the seed was dropped onto the sod ground and covered by the plow as it moved along.

Wm. Slim, who lives about four miles northwest of town, has threshed 1,600 bushels of oats from 18 acres. The oats weigh 42 pounds to the bushel. It is 88 bushels and a fraction to the acre.

Culbertson Searchlight (Valley County): Grant LeMoine was in town Wednesday and joined the Searchlight honor roll. He threshed recently the following crops: 45 acres of wheat averaging 20 bushels to the acre; 15 acres of oats averaging 45 bushels to the acre. He has 25 acres more broke which will be put in crop next year.

Mrs. F. P. Parsons brought to the Searchlight office this week a sack of potatoes which were raised on her farm east of town as a second crop on the same ground. The first crop of potatoes was dug on the 25th day of July and other potatoes planted in the same hills. This second crop is now of good size and are of delicious flavor. She also brought a sample of sweet potatoes raised on her farm. Who says Culbertson is not in the sweet potato belt?

Dillon Examiner (Beaverhead County): One of the largest hogs ever raised in the Big Hole basin was killed this week at the Ruby ranch by the foreman, Harry Hopkins. The animal tipped the beam at 450 pounds and 70 pounds of lard were obtained from it. The animal was about a year and a half old. Kansas, please take notice.

Dillon Tribune (Beaverhead County): Louis Stahl has an Irish potato story which he stands ready to prove true. On a little patch of ground containing four acres in Stahl's addition to Dillon he grew 800 sacks of potatoes, averaging 115 pounds to the sack. They were grown by irrigation. One potato measured yesterday by a representative of the Tribune was 10 inches long, 5½ inches wide and 3 inches thick.

During the past few months some amazing reports of potato production in this section have been printed in the Tribune. These reports have attracted more or less attention in other parts. This paper, this week, received a letter from J. B. Townsend, owner of Pine Crest Farm, near Stevensville, Montana, in which he says:

"I see you have some good potato reports from Beaverhead and Madison counties. As I was a potato grower in the Beaverhead valley for 15 years, I beg the privilege of submitting my report from the Bitter Root valley in Ravalli county. Twelve hundred pounds from one row 16 rods and 12 feet long.

"I plant five rows to the rod . The above yield would give 955 bushels to the acre. Let your dry farm men see what that would produce on 75 acres."

Helena Independent reprints, with comments, reports of crop productions in Fergus county published in the Inland Empire, of Moore:

Some time ago the Bureau of Agriculture, Labor and Industry issued a request to the newspapers of the state asking them to aid in the publicity work the state has undertaken by collecting and printing reports of crop yields in their respective localities.

A canvass was made by the "Inland Empire" of Moore, Fergus county, with the following result. These reports were not picked from the best ranches of the basin, but were taken from any place that we happened to hear of, regardless of location or the character of the ranch.

The following summary of crop reports from farmers in the vicinity of Moore will readily convince doubting ones that this section of the Judith basin's claim as the leading grain-growing district of the northwest is well founded and that Rock creek bench and the country around Moore outclasses all the other grain-growing regions of Montana.

Following are the reports:

E. O. Hedrick—Wheat, 150 acres, 5,100 bushels; average, 34 bushels per acre. Graded No. 1.

K. S. Nelson—Wheat, 135 acres, 7,975 bushels; average, 51½ bushels per acre. The first 12 acres of this threshed out 873 bushels, an average of 61½ bushels per acre.

John Warren—Wheat, 100 acres, 2,700 bushels; average, 27½ bushels per acre.

Scott Weaver—Wheat, 60 acres, 2,550 bushels; average 42½ bushels per acre; 30 acres of volunteer wheat, first sown three years ago, made 18 bushels per acre. Oats, 25 acres, 1,175 bushels, averaging 47 bushels per acre.

George B. McFerran—Wheat, 100 acres, 800 bushels; average 8 bushels per acre. Wheat, 60 acres, 960 bushels; average, 16 bushels per acre. Both crops struck by severe hail storm on August 11 and thought to be a total loss.

David Bricker—Wheat, 65 acres, 2,690 bushels; average, 26 bushels per acre. Wheat, 47 acres, 504 bushels; average, 12 bushels per acre. Also hailed out on August 11.

Granville Williams—Wheat 160 acres, 3,800 bushels; average, 38 bushels per acre. Graded No. 1.

Dr. T. B. Stuzman—Wheat, 17½ acres, 625 bushels; average, 35¾ bushels per acre.

Luther Key—Oats, 16 acres, 1,200 bushels; average, 75 bushels per acre.

G. L. Straight—Wheat, 36 acres, 1,200 bushels; average, 33⅔ bushels per acre.

Guy Penwell—Wheat, 90 acres, 2,430 bushels; average, 27 bushels per acre. Oats, 40 acres, 1,200 bushels; average 30 bushels per acre. These oats were sown too thin and late in June.

Otho Pickett—Wheat, 107 acres, 3,000 bushels; average, 28 bushels per acre.

Benjamin Lethleau—Wheat, 19 acres, 627 bushels; average, 33 bushels per acre. Oats,

7 acres, 490 bushels; average, 70 bushels per acre.

Hobson (Fergus County) correspondence of Great Falls Tribune: From 164 acres of land, which has been farmed by the Boyer Bros., there has been threshed in the last few days, 6,800 bushels of maccaroni wheat. This is an excellent showing, and all the old time ranchers of this section are intensely interested in the methods employed by the men who have achieved this showing.

Inland Empire, Moore (Fergus County): J. E. Lane, president of the Montana Lumber Company, who has a ranch on Louse creek bench near the Experiment Station, this week threshed out nine acres of wheat which turned out 450 bushels or 50 bushels to the acre. Mr. Lane has 160 acres of the same wheat but only threshed nine acres at this time in order to get seed. At 50 bushels per acre the 160 will yield Mr. Lane 8,000 bushels and at the present market price of 75 cents per bushel he will realize $6,000 on the crop. However, he has arranged to sell about half of the crop to ranchers for seed wheat and will receive $1 per bushel for all disposed of in that way. And to think that but two or three years ago this same land was hardly considered fit for grazing purposes and now Mr. Lane clears from $30 to $35 an acre above all expenses.

Kalispell (Flathead County). A report from Kalispell published in the Helena Independent states that Mr. Peterman threshed from his farm situated on the bench north of town 1,935 bushels of spring wheat from 45 acres, a yield of 43 bushels to the acre.

Laurel Sentinel (Yellowstone County): W. W. Shoop reports a potato crop of 1,200 bushels on a tract of about three and a half acres. He has an offer for his beet tops that would be considered a good price for the rent of Iowa land.

This paper prints a picture of a remarkable tomato vine grown on the ranch of F. B. Jackson, near Laurel. This vine grew to the height of eight feet, the fruit consisting of six tomatoes each of which weighed two pounds on the scales at the postoffice. The vine grew like a tree and support had to be provided for it.

Libby News (Lincoln County): An interesting display of products of the soil gathered from the vicinity of Libby is now on exhibition at Judge C. R. Hoffman's office, which is being viewed every day by a large number of people, and to some of the strangers who drop into the town the exhibition is quite a revelation.

Probably the most interesting article in the collection is a monstrous squash, which was raised by A. W. Grambauer upon his ranch across the river, in the forest reserve. A number of potatoes weighing about three pounds each are also shown from the same ranch.

In the collection also is a big cabbage and a rutabaga, weighing 16 pounds each, which were brought in by Mrs. Harry Hamilton. A. R. Gibson has contributed some large turnips weighing 16 pounds each, and some huge beets.

Among other products in the collection are cranberries, apples, and Yellow Flint corn, raised by J. G. Van Dyke; squash, corn and tomatoes grown by Chas. B. Remp, and some large onions grown by Otto Kienietz.

John B. Bowen shows some fine potatoes, grown on the bench south of town, and B. F. Howard, from his ranch south of Libby, brought in some large potatoes and turnips. Some prodigious potatoes raised by Mrs. Timothy Miller are also shown, and I. S. Kennedy displays some extra fine turnips and potatoes. These products were all raised without irrigation and are an ample demonstration of the productiveness of the soil in this locality.

Livingston (Park County). A report from Livingston published in the Helena Independent states that William Killorn, a Shields river farmer, threshed 2,706 bushels of oats from a field of 24 acres, an average yield of over 112 bushels to the acre.

Malta Enterprise (Valley County): From 19 acres of land Nick Schmitz threshed 22,039 pounds of oats and 5,800 pounds of barley. About 14 acres of the land was planted to oats so that the average yield was over 52 bushels per acre and is considered an excellent yield. Mr. Schmitz's experience is that light seeding brings better results than where much seed is sown.

Milo Larock of Cowan brought in a sample of white turnips raised on breaking and one tipped the scales at 11 pounds which would do credit to any turnip patch.

Miles City Independent (Custer County): Chas. Daly of Beebe came to Miles City Tuesday afternoon. He brought in samples of the results of his dry land farming, which will be taken to Billings for exhibition at the dry farming congress. There is no better corn grown anywhere than that which Mr. Daly has. The corn is Northwestern Dent and squaw, some of the ears being over a foot long. He planted thirty acres to corn, and has 25 acres of oats which yielded 60 bushels to the

acre; thirty acres of speltz and a small acreage of winter wheat was planted as an experiment.

J. B. Kempton of Terry had his crops threshed out with the following results: Rye, 37 bushels; oats, 58 bushels; and speltz, 48 bushels per acre.

Roundup Record (at the boundary of Fergus and Yellowstone counties): One of the finest samples of corn grown in the Musselshell valley this year was brought in from the NF ranch last Saturday. The ears are nearly a foot in length and are well filled, the rows being very close and compact. That corn will soon be one of the main crops of the valley is rapidly becoming to be an accepted fact.

Saco Observer (Valley County): Henry Holmes of Ashfield threshed out his 240 acre crop of oats last week and it netted him 65 bushels per acre. This looks to us like a record that will be hard to beat, especially as this was a dry farming crop.

Virginia City (Madison County) correspondence of the Butte Miner: Henry M. Rundell, who is in the city this week serving as a juror in the district court, enjoys the distinction of being the pioneer dry land farmer of Madison county. Mr. Rundell, in partnership with his brother, Whit Rundell, under the firm name of Rundell Bros., operates a large farm on Antelope creek, near Pony, and they were the first farmers in their section to experiment in the growing of wheat without irrigation. In the fall of 1897 they broke up 50 acres of land that had been no good to them for anything but pasture, and sowed it to Crail Fife wheat as an experiment. The next fall they threshed out 1,073 bushels of hard winter wheat as a result. This was the first winter wheat ever grown in that section.

The Rundell Bros. were so well satisfied that they determined that they would never again grow spring wheat and they have stuck to the resolution. Since that time they have raised some bumper crops; one year their crop averaged 73 bushels to the acre and the same year irrigated wheat went but 61 bushels to the acre. While some of their neighbors were slow in following suit, winter wheat is now grown universally throughout that section and a field of irrigated wheat is an exception. The Rundell Bros. have plenty of water, which they use for irrigating other crops, and they have the reputation, far and wide, of being among the most successful farmers in the county. They have given a great deal of their time to experimenting in the growing of various crops, and have demonstrated that many kinds of crops thought to be foreign to this part of the country can be successfully grown here. They have an orchard and have harvested several hundred boxes of apples most years, and have fruited some pears and peaches, the latter of the Alexander variety. A few years ago they were large growers of strawberries, which they shipped great distances, and one year shipped 40,000 boxes of the luscious fruit.

The Rundells are advocates of light seeding and deep plowing in the growing of grain, and they have found by actual test that larger crops are harvested under these conditions than when heavy seeding is indulged in. Besides the harvesting of larger crops the farmer saves considerable money by using a less quantity of seed to the acre.

Mr. Rundell is of the opinion that there are thousands of acres in Madison county now used solely as grazing land that are adapted to the growing of winter wheat, and predicts that ere many years roll around the upper Madison valley ,thought to be at too high an altitude for the growing of grain profitably, will be known far and wide as one of the great winter wheat sections of the country. The soil is deep and very fertile, and while it is true that spring grain would not thrive on account of the frequent frosts, winter wheat would be protected during the winter by the heavy snowfall of that section, and the grain would ripen during the warm weather of the late summer and thus mature before the early fall frosts could do it damage.

Tobacco was successfully grown at Harlem and Chinook, Chouteau county, and in Fergus county, as the following dispatch to the Butte Miner relates:

Lewistown, Sept. 10.—Shields Bros., formerly tobacco growers in Kentucky and Missouri, have surprised the natives as well as themselves by raising at their ranch on Spring creek, a few miles from Lewistown, some remarkably fine tobacco plants. Samples exhibited here have created the greatest interest. The Messrs. Shields are pretty good experts themselves and they say that so far as they are able to judge these plants, of which they have some 200, are just as good as they have ever grown elsewhere. They will shortly send some of the plants to recognized tobacco experts to learn if the plants are as good as they appear to be. It seems possible that the Judith basin may add to its fame by becoming a tobacco growing center.

Peanuts grew and matured in Valley county. On being apprised of this pleasant fact the

Kalispell Journal observed: Peanuts, the seductive goober of the Sunny South, has been added to the list of Montana products, and the name of E. D. Button of Glasgow will go thundering down the ages as the first successful grower. If Mr. Button keeps on he can soon button his pocketbook around much of the long green.

The Great Falls Leader contained an interview with Prof. Shaw, the great agricultural expert who has been examining the northern part of the state in which he says: On the bench land, one miles northeast of Glasgow (Valley county), J. W. King the past season grew 32 bushels of Alaska peas to the acre, and 38 bushels of the Excelsior. They were grown under field conditions. About four miles north of Glasgow I saw matured corn in shock on the farm of William Halleck. It was of the variety of Minnesota No. 13, and was a good crop. At the sub-experimental station north of Harlem (Chouteau county) 20 miles or more I saw winter wheat in the shock that will certainly go 35 bushels per acre, macaroni wheat that will go 30 bushels, and bald barley that will yield as well. At Cut Bank (Teton county), within about 50 miles of the Rocky Mountains, I saw oats that will yield 60 bushels to the acre. On the farm of G. C. Madison, who came from South Dakota in the spring of 1909, his crop, now threshed, gave 60 bushels of oats, 57 bushels of speltz and 40 bushels of malting barley per acre. At Harlem the crop referred to was the only crop grown within 15 miles in any direction. At Cut Bank there were but two farms within miles of the place, and neither had been farmed more than two years. I heard of one man in the Sweet Grass country, about 40 miles northward from Cut Bank, who is this year sowing 200 acres of winter wheat.

This office is informed that Oscar Johnson, whose farm is on Arrow creek, southeast of Fort Benton, in Chouteau county, last year broke 160 acres. He planted 141 acres in flax and threshed 3,416 bushels of a superior quality which he sold for $2.28 a bushel, realizing $7,768.48 therefor. Nine acres of spring wheat yielded 282 bushels; one acre of navy beans 21 bushels, and one and one-third acres of barley 93 bushels. The total value of the crop is put at $10,000. This is in a section where farming is a new industry, the land having almost exclusively been used for grazing until the past few years.

Most of the reports are from sections where crops are raised under dry farming methods and relate to crops grown without irrigation. In counties where farming has been carried on for many years the enormous crops which the soil of Montana yields excite no surprise and often are not even noted. They are what are expected.

In these extracts there is little reference to the fruit industry, yet it is apparent that acreage in orchards is every year largely increased, and it is well known that the business yields splendid returns to those engaged in it and is profitably capable of almost unlimited expansion.

The Dillon Examiner contained the following: The first prize for apple butter at the late Apple Show in Spokane was awarded to the women of the Platte family of Como, Montana. Mrs. Thomas Halloway of Florence took third prize for apple butter, and first prize for apple vinegar. In plate displays W. B. Harlan of Como received the following prizes: First on Annovikas, second on Babbits, first on Cross, Bush Colvilles, Berkins, Isham Sweets and Titovka.

The Red Lodge Picket (Carbon county) speaks thus of a noted fruit farm:

A 40-acre piece of ground near Fromberg restored to robust health and gave wealth to the Rev. John Clark. Several years ago the reverend gentleman had charge of a pastorate at Red Lodge. His health began to decay—he must quit the ministry in which he had done so much good for years. He was advised to "go back to the soil." He went and he saw and he conquered. He took up a tract near Fromberg on a hillside. For years he had watched his flock upon the hillside in the Lords' vineyard. The hillside appealed to him even in his efforts to win things material. So he planted his stakes upon the little farm which is now his beautiful home . His friends discouraged him, saying his venture would surely turn out without profit either to his physical body or his spiritual self. But he was persistent. He went his way and builded his house upon a rock. He worked early and late upon his farm, which his neighbors named "The Parson's Folly." Like the good shepherd of old he performed his duties in a way that best pleased his conscience—he labored in his field and he watched the results thereof. The neighbors looked at him askance when he planted some apple trees. Those trees in due time bore fruit and the minister was glad. The water trickled down the well-kept furrows, the roots of the trees sent forth their tendrils and brought to the main body the nourishment required to sustain it. The leaves spread from the branches, and the blossoms

burst forth in glory. It was a pretty sight, those apple blossoms on that beautiful spring morning. The harvest was abundant and the minister was glad; so also were his neighbors, who a few years ago doubted the minister's words of assurance. For now the neighbors saw with their own eyes a demonstration that convinced them of the possibilities of Clark's Fork valley in a horticultural way. The test was complete; the county people awoke to realize that at their doors spread out a magnificent field of operation. They followed the lead of the minister and today, they, too, have orchards. The Rev. Mr. Clark has in his possession a large number of blue ribbons which tell of prizes won at state and county fairs. The glory of achievement crowns not only the minister's efforts, but that worker in the vineyard is distinguished far and near as the pioneer of the fruit industry in Carbon county. The little patch of ground that seemed at first to mock the industrious efforts of the good man is today a veritable mint, an asset which put into cash would represent nearly, if not quite, $50,000. Thus occasionally does cruel circumstance thwart efforts in one direction to turn the tide in another and be blessed after all. Blessed be he who earns his bread by the sweat of the brow, for he shall be prosperous in the eyes of his neighbors and be heralded as the winner of fortune, friends and fame. That little piece of ground represents only a grain of sand in the grand aggregate of acres of which Carbon county is composed. There are other pieces just like it awaiting the touch of the hand that falters not.

REVIEW OF LEADING INDUSTRIES.

This pamphlet is concluded with a comprehensive review of the industrial progress of Montana during the year 1909 which is republished in full from the Montana Daily Rec- of Helena and an article from the Fergus County Democrat of Lewistown emphasizing the thought that Montana is the land of youth and opportunity to whom the future holds forth the fairest promise.

VALUE OF MONTANA'S PRODUCTS IN 1909.

(From the Helena Record.)

Farm, Field and Orchard.

Hay	$15,000,000
Wheat	9,337,000
Potatoes and other Vegetables	8,400,000
Oats	7,840,000
Fruits and Orchard products	7,500,000
Barley	1,600,000
Sugar Beets	1,500,000
Rye	1,180,000
Flax	150,000
Total	$52,507,000

Livestock and Wool.

Cattle	$10,000,000
Wool	8,000,000
Sheep	8,000,000
Sheep	4,000,000
Horses	1,250,000
Hogs	350,000
Total	$23,600,000

Mineral Production.

Copper	$43,000,000
Silver	8,000,000
Gold	4,000,000
Lead	2,250,000
Coal	7,500,000
Stone	1,500,000
Total	$66,250,000

Forest Products.

Lumber, ties, etc	$6,000,000

Recapitulation.

Farm and Orchard	$52,507,000
Livestock and wool	23,600,000
Home consumption	36,000,000
Mineral	66,250,000
Forest products	6,000,000
Grand total	$184,357,000

James J. Hill's prediction made five years ago that within the period indicated residents of Montana would observe a greater valuation in the output of their agricultural than mineral products, proved to be the case in 1909. At that time, the mining industry was in the zenith of its glory, nor has it fallen in appreciable extent, but the progress made in agricultural development has been of the whirlwind order and stands supreme today. The apparent slump in metallic production is due rather to a lesser price obtained for copper, which is directly traceable to the panic of 1907 and from which Europe has not recovered with the alacrity displayed by the United States.

From the very best obtainable authorities, both local and national, the Record has secured data showing the agricultural production of Montana which found its way to the markets of the world to have been valued at $76,107,000. For strictly home use and seeding purposes, it is estimated that fully $36,-

000,000 was consumed. The value of the forest products for the year is estimated at $6,000,000, with that of the precious metals $57,250,000, as estimated by both state and government officials. The market value of the coal produced at point of origin was $7,500,000, at the rate of $3.50 a ton, and that of stone and granite $1,500,000, making the grand total production for the state $181,247,000, or at the rate of $450 for every resident of the state on the basis of 400,000 population.

That these figures are not rash estimates or rough guesses is evidenced from the fact that so far at least as agricultural products are concerned, they are considerably lower than those published by the Saturday Evening Post, which places the farm value of Montana's products at $114,000,000. And in this connection, Montana is given one of the best advertisements imaginable, for comparison is made with the yield of every state in the union, and Montana's showing stands without a peer.

In other words, 30,000 farms in Montana produced crop yields valued at $114,000,000. In Colorado, the greatly advertised state, 45,000 farms produced only $99,000,000, while in California 125,000 farms yielded only $329,000,000. In Iowa 244,000 farms yielded $621,000,00, and in Texas 435,000 farms produced $623,000,000. Thus, throughout the entire list, Montana farms are shown to have a far greater yielding capacity. While it is unquestionably true that Montana farms in many instances are larger, the fecundity of its soils has played great part in achieving the results shown by the great eastern magazine. Montana farms thus produced at the rate of $3,000 each on an average, as against $2,000 in Colorado and nearly $3,000 in California with its deciduous fruit farms and semi-tropical products.

In many ways—in fact in every respect with a single exception—the copper industry—the year just closing has been the banner twelve months in the history of the state. And even this is subject to qualification in that the copper mines are producing even more red metal than ever, but the market price has dropped to an average of 13 cents, which is considered unsatisfactory. With this possible exception, the mineral industry of the state was never at a higher ebb; more gold has been produced than for many years; the silver output will exceed that of last year, and in this respect, Montana led all states of the union; while lead is expected to show a slight increase. In addition, important tungsten discoveries have been made in several sections of the state, and as this metal hardener is in great demand not only in America, but in foreign countries as well, it is regarded as probable that a new and highly profitable wing of the industry is on the verge of practical development.

The receipts of gold at the United States assay office in this city have eclipsed those of the preceding year almost every month. While this in large measure is due to the development of properties in the Little Rockies district, still the older counties have more than held their own. Five years ago, Chouteau county was known as a "cow" or agricultural and livestock section exclusively. Now, it is one of the leading gold producers, and it is authoritatively stated that offers of $3,000,000 have been refused for a single property known as the Ruby, which is shipping from $50,000 to $90,000 a month to the assay office. In Fergus, the Barnes-King has been rehabilitated in marked degree, while the Kendall and others are yielding at a bountiful rate. In Lewis and Clark, the famous Jay Gould, after an idleness of two years because of inability to secure fuel for the mill, is about ready to resume, as well as the adjoining Hubbard. Both are famous gold properties with a record extending into millions. A power plant, capable of developing 14,000 horsepower, has been built across the Landers fork of the Blackfoot and this will be used in the Gould and other properties in the Marysville district. In addition, Colonel Thomas Cruse has developed the Bald Mountain to a point where he puts it almost on a parity with the Drum Lummon, which he sold to the Rothschilds twenty years ago for $15,000,000 cash, and which produced upwards of $35,000,000.

The building of three new railroads will do much to develop the Wisdom district in southern Montana, the Radersburg in central Montana, and the Silver Camp in Lincoln county which will be tapped by the Great Falls division of the St. Paul. The placer fields of Madison and Lincoln counties have more than held their own, while in the latter county there has been such development of quartz mines that it is being compared to the Coeur d'Alenes of Idaho because of the similar formation. Indeed the fecundity of Montana's mountains is little short of marvelous, judging from the mineral yields, while in Jefferson county the Corbin-Wickes-Clancy copper district is likened to Butte. Already five or six distinct copper properties are shipping, and many others are in commercial ore.

The completion of two new dams across the

Missouri river near Helena will give a great impetus to the industry in the Helena-Butte territory, affording, as they will, unlimited and cheap electrical power for their operation. With the completion of the first dam, an electric road is to be built between Butte and Helena which will tap leading mining districts, thus affording excellent smelter facilities for ore treatment. The route has been surveyed, and the right of way has been secured for virtually the entire distance.

William Walsh, state mine inspector, estimates Montana's mineral output for 1909 at $57,000,000 or better, as follows: Copper, $43,000,000; gold, $4,000,000; silver, $8,000,000, and lead $2,500,000. These figures are regarded as conservative.

The livestock industry never experienced a better year within the last decade either with respect to prices or range conditions. With the exception of January and February, the winter was open and little feeding was necessary in the range districts, while the summer rains furnished an almost unprecedented growth of grass for summer.

According to returns to the state board of equalization, there are 4,585,000 sheep in Montana, and from these 35,000,000 pounds of wool was clipped which realized for its owners an average close to 20 cents a pound, or $7,000,000. No accurate record is kept of the sheep shipments, but it is estimated by the livestock board that these ran about as usual. Of cattle, Montana, according to the same returns, in March, had 5,924,488 head of cattle within its borders, while no imputation of dishonesty is conveyed, it is regarded as absolutely certain that in reality there are greater numbers extant in both classes. Cattle shipments amounted to between 240,000 and 245,000 head, acording to the board of livestock commissioners, and for these splendid prices were realized, ranging as high as $7.60 a hundred pounds. Not a few shipments brought $7.50 on the Chicago market. These shipments will average approximately 1,000 pounds to the animal, and at a trifle more than a $4 rate, this means a return of $10,000,000. Sheep shipments are roughly estimated to have meant $1,000,000, thus bringing the total for livestock and wool sales to $21,000,000.

In addition there has been a coal output of upwards of 2,000,000 tons, to say nothing of sapphires of an estimated value of several hundred thousand dollars. In his estimate tungsten and zinc production are not taken into account, nor is the marble and stone output, which are of no inconsiderable proportion.

But as great as are the achievements in respect to livestock and mineral output, another industry has forged to the front with such rapid strides that they almost pale into insignificance.

The wheat, oats, barley and corn crops have been the greatest on record, while the average yield has surpassed all previous high marks. The same is true of potatoes, sugar beets, alfalfa and other hays, vegetables and melons. Even to residents of Montana, talk of raising corn was regarded three years ago as a manifest impossibility, but the samples exhibited at the State Fair, raised in the Yellowstone valley, have removed all doubt, and in several sections, especially Rosebud and Yellowstone counties, it has developed into an industry of large proportions.

In his address at the State Fair, in the presence of President Taft, James J. Hill made the statement that Montana had become an integral part of the world's granary. As for quality of farm products he challenged the world, and Professor Shaw, the agricultural expert at the University of Minnesota, endorsed this statement unqualifiedly. He predicted that with more scientific methods than a mere turning of the soil, Montana would soon establish a world-wide reputation.

From actual crop yields statistics have been prepared by government authorities at Washington showing that Montana has most fertile soils—eclipsed not even by those of California or Illinois. For ten years, and certainly this is a sufficient period to indicate its substantial nature, the average yield of wheat has been 26.8 bushels, 49 bushels of oats and 27.6 bushels of barley. Thus, the wheat average is shown to be twice that of the entire nation as a whole and far greater than that of Russia or France. With the exception of Belgium alone, it has the world's record average for oats, and the same is true of barley. In potatoes, the average an acre is 175 bushels, while flax makes a correspondingly good showing.

The state possesses an area of 93,000,000 acres, subdivided as follows: Wooded, 27,000,000; forest reserves, 20,389,000; unsurveyed or unavailable, 22,000,000; arable, 30,000,000. Of the latter, less than one-fourth is occupied, while forest reserves are also available for homesteads.

Montana is also one of the best watered states in the union, possessing as it does two of the largest rivers in the west, to say nothing of innumerable falls streams, fed from the perpetually snow-capped mountains. The government has half a dozen or more irrigation

projects under way, involving hundreds of thousands of acres; three large tracts have been reclaimed under the provisions of the Carey act and others are in contemplation, while the number of private irrigation projects is unusually large. As an example of what these mean, it may be stated that lands selling at $10 before being reclaimed are now quoted as high as $100 near Billings, where sugar beets form the chief crop, while lands devoted to orcharding net their owners even more than that.

It was the statement of Mr. Hill at the Montana State Fair last fall that in all his travels he had never seen better or even quite as good specimens of apples, vegetables and fruits and that the same was true of the grains, and which came from every section of the state.

And orchards and fruits have proved the best source of income of all Montana industries. For example, a Carbon county preacher, who ten years ago borrowed enough money to make the filing payment on 80 acres of land, now realizes $10,000 a year from his orchard thereon, and he has refused an offer of $25,000 for his farm. Flathead county and Bitter Root orchardists have realized as high at $1,000 an acre from apple sales, while strawberry raising in the valley below Helena is netting owners at the rate of $500 an acre annually.

The state is being better advertised than ever before in its history by the railroads and the results are beginning to be seen. All Montana land offices have established new records in homestead and other entries; it has been necessary to establish 167 new postoffices in the state within the last 18 months to provide mail facilities for settlers, and many new rural routes.

An illustration of the rapid growth of the state is to be seen in Dawson and Valley counties, where ten years ago one could drive for miles and never see a fence; now there is a settler on every quarter section practically, and fences everywhere. This driving out of the big range stockmen does not mean small livestock holdings; indeed, the contrary is true in that one acre of alfalfa equals ten of ordinary range, and stockmen have adopted the eastern system of feeding the year around, thus getting far quicker returns.

As great as were the achievements of 1909, they will be eclipsed in 1910, because of the cultivation of a far greater acreage.

THE LAND OF YOUTH.

Fergus County Democrat: In those long settled communities where every possible source of growth and development has been tapped, the birth of another year offers opportunity only for looking backward, quickly casting up the time worn accounts of the days gone by and opening up columns for the sure and invariable figures of another circle of the planet. Hope of further progress along material lines has long since ceased to exist and those in whose breasts stir the impulse to "do things, not dream them all day long," strain their eyes for a beckoning sign from the burgeoning land toward the setting sun.

Out here where wide stretched plain and snow topped mountains meet, where every hope finds favor with the fates, where fortune fair awaits the magic touch of honest effort, the past is held secure and the new year sentiment draws inspiration from the future only.

'Tis foolish here to try to write in the figures for the coming year. Only imagination can approximate the computations for the new born months. How many new hands shall come to help turn the grass grown sod, what gentle rains shall bring life to the growing crops, what strategy shall the elements employ to aid the hopeful swain, how fat shall wax flocks and herds upon the wind kissed range—these are elements which defeat the figures of the prophet.

Age, upon the new year morn, finds inspiration in reviewing battles won. Youth draws comfort from the battles yet to come. Age turns the leaves of mem'ry backward. Youth, impatient, seeks to draw aside the veil which screens the days to come. Age would stay the wings of time, youth would urge to faster flight.

Montana is today the land of youth. For us the new year holds a bow of splendid promise. That we may open wide the door of Opportunity and find honor, wealth and happiness among the treasures of the days to come would be our wish.